National Accreditation Board for Testing and Calibration Laboratories

SCOPE OF ACCREDITATION

Laboratory Name : HINDUSTAN PETROLEUM CORPORATION LIMITED, VISAKH REFINERY- QUALITYCONTROL LABORATORY, MALKAPURAM, VISAKHAPATNAM, ANDHRA PRADESH, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number TC-7406 **Page No** 1 of 27

Validity 10/11/2022 to 09/11/2024 **Last Amended on** -

S.No	Discipline / Group	Materials or Products tested	Component, parameter or characteristic tested / Specific Test Performed / Tests or type of tests performed	Test Method Specification against which tests are performed and / or the techniques / equipment used
Permanent Facility				
1	CHEMICAL- PETROLEUM AND PRODUCTS	Auto Liquefied Petroleum Gas	Analysis of Auto Liquefied petroleum gases C5 by GC	ISO 7941
2	CHEMICAL- PETROLEUM AND PRODUCTS	Auto Liquefied Petroleum Gas	Analysis of Auto Liquefied petroleum gases C5 by GC	ISO 7941
3	CHEMICAL- PETROLEUM AND PRODUCTS	Automotive Diesel Fuel	Acidity	ASTM D974
4	CHEMICAL- PETROLEUM AND PRODUCTS	Automotive Diesel Fuel	Acidity	IS 1448 (Part 2)
5	CHEMICAL- PETROLEUM AND PRODUCTS	Automotive Diesel Fuel	Ash Content	ASTM D482
6	CHEMICAL- PETROLEUM AND PRODUCTS	Automotive Diesel Fuel	Ash Content	IS 1448 (Part 4) Sec 1
7	CHEMICAL- PETROLEUM AND PRODUCTS	Automotive Diesel Fuel	Calculated Cetane Index by Four Variable Equation	ASTM D4737
8	CHEMICAL- PETROLEUM AND PRODUCTS	Automotive Diesel Fuel	Calculated Cetane Index by Four Variable Equation	ISO 4264
9	CHEMICAL- PETROLEUM AND PRODUCTS	Automotive Diesel Fuel	Carbon Residue by Rams Bottom Method	ASTM D524
10	CHEMICAL- PETROLEUM AND PRODUCTS	Automotive Diesel Fuel	Carbon Residue by Rams Bottom Method	IS 1448 (Part 8)
11	CHEMICAL- PETROLEUM AND PRODUCTS	Automotive Diesel Fuel	Cetane number	ASTM D613
12	CHEMICAL- PETROLEUM AND PRODUCTS	Automotive Diesel Fuel	Cetane number	IS 1448 (Part 9)
13	CHEMICAL- PETROLEUM AND PRODUCTS	Automotive Diesel Fuel	Cold filter Plugging point (CFPP)	ASTM D6371
14	CHEMICAL- PETROLEUM AND PRODUCTS	Automotive Diesel Fuel	Cold filter Plugging point (CFPP)	IS 1448 (Part 110)
15	CHEMICAL- PETROLEUM AND PRODUCTS	Automotive Diesel Fuel	Contamination	EN 12662
16	CHEMICAL- PETROLEUM AND PRODUCTS	Automotive Diesel Fuel	Contamination	IP 440
17	CHEMICAL- PETROLEUM AND PRODUCTS	Automotive Diesel Fuel	Copper Corrosion	ASTM D130
18	CHEMICAL- PETROLEUM AND PRODUCTS	Automotive Diesel Fuel	Copper Corrosion	IS 1448 (Part 15)

SCOPE OF ACCREDITATION

Laboratory Name : HINDUSTAN PETROLEUM CORPORATION LIMITED, VISAKH REFINERY- QUALITYCONTROL LABORATORY, MALKAPURAM, VISAKHAPATNAM, ANDHRA PRADESH, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number TC-7406 **Page No** 2 of 27

Validity 10/11/2022 to 09/11/2024 **Last Amended on** -

S.No	Discipline / Group	Materials or Products tested	Component, parameter or characteristic tested / Specific Test Performed / Tests or type of tests performed	Test Method Specification against which tests are performed and / or the techniques / equipment used
19	CHEMICAL- PETROLEUM AND PRODUCTS	Automotive Diesel Fuel	Density by hydrometer	ASTM D1298
20	CHEMICAL- PETROLEUM AND PRODUCTS	Automotive Diesel Fuel	Density by hydrometer	IS 1448 (Part 16)
21	CHEMICAL- PETROLEUM AND PRODUCTS	Automotive Diesel Fuel	Density of Liquids by Digital Density Meter	ASTM D4052
22	CHEMICAL- PETROLEUM AND PRODUCTS	Automotive Diesel Fuel	Distillation temperature Range	ASTM D 86
23	CHEMICAL- PETROLEUM AND PRODUCTS	Automotive Diesel Fuel	Distillation temperature Range	IS 1448 (Part 18)
24	CHEMICAL- PETROLEUM AND PRODUCTS	Automotive Diesel Fuel	Distillation temperature Range	ISO 3405
25	CHEMICAL- PETROLEUM AND PRODUCTS	Automotive Diesel Fuel	Distillation volume range	ASTM D 86
26	CHEMICAL- PETROLEUM AND PRODUCTS	Automotive Diesel Fuel	Distillation volume range	IS 1448 (Part 18)
27	CHEMICAL- PETROLEUM AND PRODUCTS	Automotive Diesel Fuel	Distillation volume range	ISO 3405
28	CHEMICAL- PETROLEUM AND PRODUCTS	Automotive Diesel Fuel	Distillation, 95 Percent (v/v), recovery	ASTM D 86
29	CHEMICAL- PETROLEUM AND PRODUCTS	Automotive Diesel Fuel	Distillation, 95 Percent (v/v), recovery	IS 1448 (Part 18)
30	CHEMICAL- PETROLEUM AND PRODUCTS	Automotive Diesel Fuel	Distillation, 95 Percent (v/v), recovery	ISO 3405
31	CHEMICAL- PETROLEUM AND PRODUCTS	Automotive Diesel Fuel	Flash point (Abel)	IP 170
32	CHEMICAL- PETROLEUM AND PRODUCTS	Automotive Diesel Fuel	Flash point (Abel)	IS 1448 (Part 20) Method B
33	CHEMICAL- PETROLEUM AND PRODUCTS	Automotive Diesel Fuel	Inorganic Acidity	ASTM D974
34	CHEMICAL- PETROLEUM AND PRODUCTS	Automotive Diesel Fuel	Lubricity by HFRR	IS 1448(Part 149)
35	CHEMICAL- PETROLEUM AND PRODUCTS	Automotive Diesel Fuel	Lubricity by HFRR	ISO 12156-1
36	CHEMICAL- PETROLEUM AND PRODUCTS	Automotive Diesel Fuel	Manual Distillation volume range	IS 1448 (Part 18)
37	CHEMICAL- PETROLEUM AND PRODUCTS	Automotive Diesel Fuel	Manual Distillation temperature Range	IS 1448 (Part 18)

SCOPE OF ACCREDITATION

Laboratory Name : HINDUSTAN PETROLEUM CORPORATION LIMITED, VISAKH REFINERY- QUALITYCONTROL LABORATORY, MALKAPURAM, VISAKHAPATNAM, ANDHRA PRADESH, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number TC-7406 **Page No** 3 of 27

Validity 10/11/2022 to 09/11/2024 **Last Amended on** -

S.No	Discipline / Group	Materials or Products tested	Component, parameter or characteristic tested / Specific Test Performed / Tests or type of tests performed	Test Method Specification against which tests are performed and / or the techniques / equipment used
38	CHEMICAL- PETROLEUM AND PRODUCTS	Automotive Diesel Fuel	Oxidation stability	ASTM D2274
39	CHEMICAL- PETROLEUM AND PRODUCTS	Automotive Diesel Fuel	Oxidation stability	IS 1448 (Part 154)
40	CHEMICAL- PETROLEUM AND PRODUCTS	Automotive Diesel Fuel	Poly Aromatic Hydrocarbons (PAH)	ASTM D6591
41	CHEMICAL- PETROLEUM AND PRODUCTS	Automotive Diesel Fuel	Poly Aromatic Hydrocarbons (PAH)	EN 12916
42	CHEMICAL- PETROLEUM AND PRODUCTS	Automotive Diesel Fuel	Poly Aromatic Hydrocarbons (PAH)	IP 391
43	CHEMICAL- PETROLEUM AND PRODUCTS	Automotive Diesel Fuel	Pour Point	ASTM D97
44	CHEMICAL- PETROLEUM AND PRODUCTS	Automotive Diesel Fuel	Pour Point	IS 1448 (Part 10) Sec 2
45	CHEMICAL- PETROLEUM AND PRODUCTS	Automotive Diesel Fuel	Pour point (Automatic Tilt method)	ASTM D5950
46	CHEMICAL- PETROLEUM AND PRODUCTS	Automotive Diesel Fuel	Sulphur by WDXRF	ISO 20884
47	CHEMICAL- PETROLEUM AND PRODUCTS	Automotive Diesel Fuel	Total sulphur by UV Fluorescence	ASTM D5453
48	CHEMICAL- PETROLEUM AND PRODUCTS	Automotive Diesel Fuel	Total sulphur by UV Fluorescence	ISO 20846
49	CHEMICAL- PETROLEUM AND PRODUCTS	Automotive Diesel Fuel	Viscosity Kinematic	ASTM D445
50	CHEMICAL- PETROLEUM AND PRODUCTS	Automotive Diesel Fuel	Viscosity Kinematic	IS 1448 (Part 25)/Sec 1
51	CHEMICAL- PETROLEUM AND PRODUCTS	Automotive Diesel Fuel	Water - Coulometric Karl fisher Titration	ASTM D6304 Method A
52	CHEMICAL- PETROLEUM AND PRODUCTS	Automotive Diesel Fuel	Water - Coulometric Karl fisher Titration	ISO 12937
53	CHEMICAL- PETROLEUM AND PRODUCTS	Automotive Liquefied Petroleum Gas (Auto LPG)	Analysis of Auto Liquefied petroleum gases C5 by GC	ASTM D2163
54	CHEMICAL- PETROLEUM AND PRODUCTS	Automotive Liquefied Petroleum Gas (Auto LPG)	Analysis of Auto Liquefied petroleum gases C5 by GC	IS 1448 (Part 151)
55	CHEMICAL- PETROLEUM AND PRODUCTS	Automotive Liquefied Petroleum Gas (Auto LPG)	Auto LPG MON	14861 Annex A
56	CHEMICAL- PETROLEUM AND PRODUCTS	Automotive Liquefied Petroleum Gas (Auto LPG)	Calculation method for Density	IP 432

SCOPE OF ACCREDITATION

Laboratory Name : HINDUSTAN PETROLEUM CORPORATION LIMITED, VISAKH REFINERY- QUALITYCONTROL LABORATORY, MALKAPURAM, VISAKHAPATNAM, ANDHRA PRADESH, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number TC-7406 **Page No** 4 of 27

Validity 10/11/2022 to 09/11/2024 **Last Amended on** -

S.No	Discipline / Group	Materials or Products tested	Component, parameter or characteristic tested / Specific Test Performed / Tests or type of tests performed	Test Method Specification against which tests are performed and / or the techniques / equipment used
57	CHEMICAL- PETROLEUM AND PRODUCTS	Automotive Liquefied Petroleum Gas (Auto LPG)	Calculation method for Density	ISO 8973
58	CHEMICAL- PETROLEUM AND PRODUCTS	Automotive Liquefied Petroleum Gas (Auto LPG)	Calculation method for Vapour pressure	IP 432
59	CHEMICAL- PETROLEUM AND PRODUCTS	Automotive Liquefied Petroleum Gas (Auto LPG)	Copper Corrosion	ISO 6251
60	CHEMICAL- PETROLEUM AND PRODUCTS	Automotive Liquefied Petroleum Gas (Auto LPG)	Dienes (as 1,3 Butadiene)	ISO 7941
61	CHEMICAL- PETROLEUM AND PRODUCTS	Automotive Liquefied Petroleum Gas (Auto LPG)	Free Water	HPC/VRQC/Test method/1
62	CHEMICAL- PETROLEUM AND PRODUCTS	Automotive Liquefied Petroleum Gas (Auto LPG)	Hydrogen Sulphide in Liquefied Petroleum (LP Gases)	ISO 8819
63	CHEMICAL- PETROLEUM AND PRODUCTS	Automotive Liquefied Petroleum Gas (Auto LPG)	Odour	IS 14861 Note 5
64	CHEMICAL- PETROLEUM AND PRODUCTS	Automotive Liquefied Petroleum Gas (Auto LPG)	Oily Residue	ISO 13757
65	CHEMICAL- PETROLEUM AND PRODUCTS	Automotive Liquefied Petroleum Gas (Auto LPG)	Sulphur	ASTM D3246
66	CHEMICAL- PETROLEUM AND PRODUCTS	Aviation Turbine Fuel (ATF) JET A-1	Acidity	ASTM D3242
67	CHEMICAL- PETROLEUM AND PRODUCTS	Aviation Turbine Fuel (ATF) JET A-1	Acidity	IS 1448 (Part 113)
68	CHEMICAL- PETROLEUM AND PRODUCTS	Aviation Turbine Fuel (ATF) JET A-1	Cleanliness For =14 µm (4 to 30) µm	IP 577
69	CHEMICAL- PETROLEUM AND PRODUCTS	Aviation Turbine Fuel (ATF) JET A-1	Cleanliness For =21 µm (4 to 30) µm	IP 577
70	CHEMICAL- PETROLEUM AND PRODUCTS	Aviation Turbine Fuel (ATF) JET A-1	Cleanliness For =30 µm (4 to 30) µm	IP 577
71	CHEMICAL- PETROLEUM AND PRODUCTS	Aviation Turbine Fuel (ATF) JET A-1	Cleanliness For =4 µm, (4 to 30) µm	IP 577
72	CHEMICAL- PETROLEUM AND PRODUCTS	Aviation Turbine Fuel (ATF) JET A-1	Cleanliness For =6 µm (4 to 30) µm	IP 577
73	CHEMICAL- PETROLEUM AND PRODUCTS	Aviation Turbine Fuel (ATF) JET A-1	Colour - Automatic Tristimulus method	ASTM D6045
74	CHEMICAL- PETROLEUM AND PRODUCTS	Aviation Turbine Fuel (ATF) JET A-1	Colour Saybolt	ASTM D156
75	CHEMICAL- PETROLEUM AND PRODUCTS	Aviation Turbine Fuel (ATF) JET A-1	Copper Corrosion	ASTM D130

SCOPE OF ACCREDITATION

Laboratory Name : HINDUSTAN PETROLEUM CORPORATION LIMITED, VISAKH REFINERY- QUALITYCONTROL LABORATORY, MALKAPURAM, VISAKHAPATNAM, ANDHRA PRADESH, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number TC-7406 **Page No** 5 of 27

Validity 10/11/2022 to 09/11/2024 **Last Amended on** -

S.No	Discipline / Group	Materials or Products tested	Component, parameter or characteristic tested / Specific Test Performed / Tests or type of tests performed	Test Method Specification against which tests are performed and / or the techniques / equipment used
76	CHEMICAL- PETROLEUM AND PRODUCTS	Aviation Turbine Fuel (ATF) JET A-1	Copper Corrosion	IS 1448 (Part 15)
77	CHEMICAL- PETROLEUM AND PRODUCTS	Aviation Turbine Fuel (ATF) JET A-1	Density by hydrometer	ASTM D1298
78	CHEMICAL- PETROLEUM AND PRODUCTS	Aviation Turbine Fuel (ATF) JET A-1	Density by hydrometer	IS 1448 (Part 16)
79	CHEMICAL- PETROLEUM AND PRODUCTS	Aviation Turbine Fuel (ATF) JET A-1	Density of Liquids by Digital Density Meter	ASTM D4052
80	CHEMICAL- PETROLEUM AND PRODUCTS	Aviation Turbine Fuel (ATF) JET A-1	Distillation 10 % recovery	ASTM D86
81	CHEMICAL- PETROLEUM AND PRODUCTS	Aviation Turbine Fuel (ATF) JET A-1	Distillation 10 % recovery	IS 1448 (Part 18)
82	CHEMICAL- PETROLEUM AND PRODUCTS	Aviation Turbine Fuel (ATF) JET A-1	Distillation 50 % recovery	ASTM D86
83	CHEMICAL- PETROLEUM AND PRODUCTS	Aviation Turbine Fuel (ATF) JET A-1	Distillation 50 % recovery	IS 1448 (Part 18)
84	CHEMICAL- PETROLEUM AND PRODUCTS	Aviation Turbine Fuel (ATF) JET A-1	Distillation 90 % recovery	ASTM D86
85	CHEMICAL- PETROLEUM AND PRODUCTS	Aviation Turbine Fuel (ATF) JET A-1	Distillation 90 % recovery	IS 1448 (Part 18)
86	CHEMICAL- PETROLEUM AND PRODUCTS	Aviation Turbine Fuel (ATF) JET A-1	Distillation temperature Range	ASTM D86
87	CHEMICAL- PETROLEUM AND PRODUCTS	Aviation Turbine Fuel (ATF) JET A-1	Distillation temperature Range	IS 1448 (Part 18)
88	CHEMICAL- PETROLEUM AND PRODUCTS	Aviation Turbine Fuel (ATF) JET A-1	Distillation volume range	ASTM D86
89	CHEMICAL- PETROLEUM AND PRODUCTS	Aviation Turbine Fuel (ATF) JET A-1	Distillation volume range	IS 1448 (Part 18)
90	CHEMICAL- PETROLEUM AND PRODUCTS	Aviation Turbine Fuel (ATF) JET A-1	Distillation Final Boiling Point	ASTM D86
91	CHEMICAL- PETROLEUM AND PRODUCTS	Aviation Turbine Fuel (ATF) JET A-1	Distillation Final Boiling Point	IS 1448 (Part 18)
92	CHEMICAL- PETROLEUM AND PRODUCTS	Aviation Turbine Fuel (ATF) JET A-1	Distillation Initial Boiling Point	IS 1448 (Part 18)
93	CHEMICAL- PETROLEUM AND PRODUCTS	Aviation Turbine Fuel (ATF) JET A-1	Distillation Initial Boiling Point	ASTM D86
94	CHEMICAL- PETROLEUM AND PRODUCTS	Aviation Turbine Fuel (ATF) JET A-1	Electrical conductivity	ASTM D2624

SCOPE OF ACCREDITATION

Laboratory Name : HINDUSTAN PETROLEUM CORPORATION LIMITED, VISAKH REFINERY- QUALITYCONTROL LABORATORY, MALKAPURAM, VISAKHAPATNAM, ANDHRA PRADESH, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number TC-7406 **Page No** 6 of 27

Validity 10/11/2022 to 09/11/2024 **Last Amended on** -

S.No	Discipline / Group	Materials or Products tested	Component, parameter or characteristic tested / Specific Test Performed / Tests or type of tests performed	Test Method Specification against which tests are performed and / or the techniques / equipment used
95	CHEMICAL- PETROLEUM AND PRODUCTS	Aviation Turbine Fuel (ATF) JET A-1	Electrical conductivity	IP 274
96	CHEMICAL- PETROLEUM AND PRODUCTS	Aviation Turbine Fuel (ATF) JET A-1	Electrical conductivity	IS 1448 (Part 148)
97	CHEMICAL- PETROLEUM AND PRODUCTS	Aviation Turbine Fuel (ATF) JET A-1	Electrical conductivity	ISO 6297
98	CHEMICAL- PETROLEUM AND PRODUCTS	Aviation Turbine Fuel (ATF) JET A-1	Estimation of Net heat of combustion	ASTM D3338M
99	CHEMICAL- PETROLEUM AND PRODUCTS	Aviation Turbine Fuel (ATF) JET A-1	Existing Gum with Air	ASTM D381
100	CHEMICAL- PETROLEUM AND PRODUCTS	Aviation Turbine Fuel (ATF) JET A-1	Existing Gum with Air	IS 1448 (Part 29)
101	CHEMICAL- PETROLEUM AND PRODUCTS	Aviation Turbine Fuel (ATF) JET A-1	Flash point (Abel)	IP 170
102	CHEMICAL- PETROLEUM AND PRODUCTS	Aviation Turbine Fuel (ATF) JET A-1	Flash point (Abel)	IS 1448 (Part 20) Method B
103	CHEMICAL- PETROLEUM AND PRODUCTS	Aviation Turbine Fuel (ATF) JET A-1	Freezing point	ASTM D2386
104	CHEMICAL- PETROLEUM AND PRODUCTS	Aviation Turbine Fuel (ATF) JET A-1	Freezing point	IS 1448 (Part 11)
105	CHEMICAL- PETROLEUM AND PRODUCTS	Aviation Turbine Fuel (ATF) JET A-1	Freezing point (Automatic Laser method)	ASTM D7153
106	CHEMICAL- PETROLEUM AND PRODUCTS	Aviation Turbine Fuel (ATF) JET A-1	Hydrocarbon types by FIA - Aromatics	ASTM D1319
107	CHEMICAL- PETROLEUM AND PRODUCTS	Aviation Turbine Fuel (ATF) JET A-1	Hydrocarbon types by FIA - Aromatics	IS 1448 (Part 23)
108	CHEMICAL- PETROLEUM AND PRODUCTS	Aviation Turbine Fuel (ATF) JET A-1	Hydrocarbon types by FIA- Olefins	ASTM D 1319
109	CHEMICAL- PETROLEUM AND PRODUCTS	Aviation Turbine Fuel (ATF) JET A-1	Hydrocarbon types by FIA- Olefins	IS 1448 (Part 23)
110	CHEMICAL- PETROLEUM AND PRODUCTS	Aviation Turbine Fuel (ATF) JET A-1	Lubricity by BOCLE	ASTM D5001
111	CHEMICAL- PETROLEUM AND PRODUCTS	Aviation Turbine Fuel (ATF) JET A-1	Manual Distillation volume range	IS 1448 (Part 18)
112	CHEMICAL- PETROLEUM AND PRODUCTS	Aviation Turbine Fuel (ATF) JET A-1	Manual Distillation temperature Range	IS 1448 (Part 18)
113	CHEMICAL- PETROLEUM AND PRODUCTS	Aviation Turbine Fuel (ATF) JET A-1	Mercaptan Sulphur	ASTM D3227

SCOPE OF ACCREDITATION

Laboratory Name : HINDUSTAN PETROLEUM CORPORATION LIMITED, VISAKH REFINERY- QUALITYCONTROL LABORATORY, MALKAPURAM, VISAKHAPATNAM, ANDHRA PRADESH, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number TC-7406 **Page No** 7 of 27

Validity 10/11/2022 to 09/11/2024 **Last Amended on** -

S.No	Discipline / Group	Materials or Products tested	Component, parameter or characteristic tested / Specific Test Performed / Tests or type of tests performed	Test Method Specification against which tests are performed and / or the techniques / equipment used
114	CHEMICAL- PETROLEUM AND PRODUCTS	Aviation Turbine Fuel (ATF) JET A-1	Naphthalene	ASTM D1840
115	CHEMICAL- PETROLEUM AND PRODUCTS	Aviation Turbine Fuel (ATF) JET A-1	Naphthalene	IS 1448 (Part 118)
116	CHEMICAL- PETROLEUM AND PRODUCTS	Aviation Turbine Fuel (ATF) JET A-1	Particulate contamination by laboratory filtration	ASTM D5452
117	CHEMICAL- PETROLEUM AND PRODUCTS	Aviation Turbine Fuel (ATF) JET A-1	Percent Loss	ASTM D86
118	CHEMICAL- PETROLEUM AND PRODUCTS	Aviation Turbine Fuel (ATF) JET A-1	Percent Loss	IS 1448 (Part 18)
119	CHEMICAL- PETROLEUM AND PRODUCTS	Aviation Turbine Fuel (ATF) JET A-1	Residue	ASTM D86
120	CHEMICAL- PETROLEUM AND PRODUCTS	Aviation Turbine Fuel (ATF) JET A-1	Residue	IS 1448 (Part 18)
121	CHEMICAL- PETROLEUM AND PRODUCTS	Aviation Turbine Fuel (ATF) JET A-1	Silver Strip Corrosion	IS 1571:Annex B
122	CHEMICAL- PETROLEUM AND PRODUCTS	Aviation Turbine Fuel (ATF) JET A-1	Smoke point	ASTM D1322
123	CHEMICAL- PETROLEUM AND PRODUCTS	Aviation Turbine Fuel (ATF) JET A-1	Smoke point	IP 598
124	CHEMICAL- PETROLEUM AND PRODUCTS	Aviation Turbine Fuel (ATF) JET A-1	Smoke point	IS 1448 (Part 31)
125	CHEMICAL- PETROLEUM AND PRODUCTS	Aviation Turbine Fuel (ATF) JET A-1	Sulphur by EDXRF	ASTM D4294
126	CHEMICAL- PETROLEUM AND PRODUCTS	Aviation Turbine Fuel (ATF) JET A-1	Sulphur by WDXRF	ASTM D2622
127	CHEMICAL- PETROLEUM AND PRODUCTS	Aviation Turbine Fuel (ATF) JET A-1	Thermal Oxidation Stability (JFTOT) - Tube rating	ASTM D3241
128	CHEMICAL- PETROLEUM AND PRODUCTS	Aviation Turbine Fuel (ATF) JET A-1	Thermal Oxidation Stability (JFTOT) - Tube rating	IP 323
129	CHEMICAL- PETROLEUM AND PRODUCTS	Aviation Turbine Fuel (ATF) JET A-1	Thermal Oxidation Stability (JFTOT) - Tube rating	ISO 6249
130	CHEMICAL- PETROLEUM AND PRODUCTS	Aviation Turbine Fuel (ATF) JET A-1	Thermal Oxidation Stability (JFTOT))-Differential Pressure	ASTM D3241
131	CHEMICAL- PETROLEUM AND PRODUCTS	Aviation Turbine Fuel (ATF) JET A-1	Thermal Oxidation Stability (JFTOT))-Differential Pressure	IP 323
132	CHEMICAL- PETROLEUM AND PRODUCTS	Aviation Turbine Fuel (ATF) JET A-1	Thermal Oxidation Stability (JFTOT))-Differential Pressure	ISO 6249

SCOPE OF ACCREDITATION

Laboratory Name : HINDUSTAN PETROLEUM CORPORATION LIMITED, VISAKH REFINERY- QUALITYCONTROL LABORATORY, MALKAPURAM, VISAKHAPATNAM, ANDHRA PRADESH, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number TC-7406 **Page No** 8 of 27

Validity 10/11/2022 to 09/11/2024 **Last Amended on** -

S.No	Discipline / Group	Materials or Products tested	Component, parameter or characteristic tested / Specific Test Performed / Tests or type of tests performed	Test Method Specification against which tests are performed and / or the techniques / equipment used
133	CHEMICAL- PETROLEUM AND PRODUCTS	Aviation Turbine Fuel (ATF) JET A-1	Thermal Oxidation Stability (JFTOT)- Tube rating	IS 1448 (Part 97)
134	CHEMICAL- PETROLEUM AND PRODUCTS	Aviation Turbine Fuel (ATF) JET A-1	Thermal Oxidation Stability (JFTOT)-Differential Pressure	IS 1448 (Part 97)
135	CHEMICAL- PETROLEUM AND PRODUCTS	Aviation Turbine Fuel (ATF) JET A-1	Viscosity Kinematic	IS 1448 (Part 25)/Sec 1
136	CHEMICAL- PETROLEUM AND PRODUCTS	Aviation Turbine Fuel (ATF) JET A-1	Viscosity Kinematic at -20ºC	ASTM D445
137	CHEMICAL- PETROLEUM AND PRODUCTS	Aviation Turbine Fuel (ATF) JET A-1	Visual Appearance	ASTM D 4176
138	CHEMICAL- PETROLEUM AND PRODUCTS	Aviation Turbine Fuel (ATF) JET A-1	Water Reaction	IS 1448 (Part 42)
139	CHEMICAL- PETROLEUM AND PRODUCTS	Aviation Turbine Fuel (ATF) JET A-1	Water separation characteristics (MSEP)	ASTM D3948
140	CHEMICAL- PETROLEUM AND PRODUCTS	Aviation Turbine Fuel (ATF) JET A-1	Water separation characteristics (MSEP)	IS 1448 (Part 142)
141	CHEMICAL- PETROLEUM AND PRODUCTS	Aviation Turbine Fuel (ATF) JETA-1	Doctor Test	IS 1448 (Part 19)
142	CHEMICAL- PETROLEUM AND PRODUCTS	Bitumen Viscosity Grade (VG-10,30,40 Grades)	Ductility on Residue after RTFOT	ASTM D2872
143	CHEMICAL- PETROLEUM AND PRODUCTS	Bitumen Viscosity Grade (VG-10,30,40 Grades)	Ductility on Residue after RTFOT	IS 1208
144	CHEMICAL- PETROLEUM AND PRODUCTS	Bitumen Viscosity Grade (VG-10,30,40 Grades)	Flash point (COC)	IS 1448 (Part 69)
145	CHEMICAL- PETROLEUM AND PRODUCTS	Bitumen Viscosity Grade (VG-10,30,40 Grades)	Penetration	ASTM D5
146	CHEMICAL- PETROLEUM AND PRODUCTS	Bitumen Viscosity Grade (VG-10,30,40 Grades)	Penetration	IS 1203
147	CHEMICAL- PETROLEUM AND PRODUCTS	Bitumen Viscosity Grade (VG-10,30,40 Grades)	Softening point	ASTM D36
148	CHEMICAL- PETROLEUM AND PRODUCTS	Bitumen Viscosity Grade (VG-10,30,40 Grades)	Softening point	IS 1205
149	CHEMICAL- PETROLEUM AND PRODUCTS	Bitumen Viscosity Grade (VG-10,30,40 Grades)	Solubility in trichloroethylene	ASTM D2042
150	CHEMICAL- PETROLEUM AND PRODUCTS	Bitumen Viscosity Grade (VG-10,30,40 Grades)	Solubility in trichloroethylene	IS 1216
151	CHEMICAL- PETROLEUM AND PRODUCTS	Bitumen Viscosity Grade (VG-10,30,40 Grades)	Specific Gravity	IS 1202

SCOPE OF ACCREDITATION

Laboratory Name : HINDUSTAN PETROLEUM CORPORATION LIMITED, VISAKH REFINERY- QUALITYCONTROL LABORATORY, MALKAPURAM, VISAKHAPATNAM, ANDHRA PRADESH, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number TC-7406 **Page No** 9 of 27

Validity 10/11/2022 to 09/11/2024 **Last Amended on** -

S.No	Discipline / Group	Materials or Products tested	Component, parameter or characteristic tested / Specific Test Performed / Tests or type of tests performed	Test Method Specification against which tests are performed and / or the techniques / equipment used
152	CHEMICAL- PETROLEUM AND PRODUCTS	Bitumen Viscosity Grade (VG-10,30,40 Grades)	Viscosity Absolute at 60 °C	IS 1206 (Part2)
153	CHEMICAL- PETROLEUM AND PRODUCTS	Bitumen Viscosity Grade (VG-10,30,40 Grades)	Viscosity Kinematic @ 135 °C	IS 1206 (Part3)
154	CHEMICAL- PETROLEUM AND PRODUCTS	Crude oil	Density of Liquids by Digital Density Meter	ASTM D5002
155	CHEMICAL- PETROLEUM AND PRODUCTS	Crude oil	Pour Point	ASTM D97
156	CHEMICAL- PETROLEUM AND PRODUCTS	Crude oil	Pour Point	IS 1448 (Part 10) Sec 2
157	CHEMICAL- PETROLEUM AND PRODUCTS	Crude oil	S&W (Sediment & Water)	ASTM D4007
158	CHEMICAL- PETROLEUM AND PRODUCTS	Crude oil	S&W (Sediment & Water)	IS 1448 (Part 41)
159	CHEMICAL- PETROLEUM AND PRODUCTS	Crude oil	Sediments by Membrane Filtration	ASTM D4807
160	CHEMICAL- PETROLEUM AND PRODUCTS	Crude oil	Sulphur	ASTM D4294
161	CHEMICAL- PETROLEUM AND PRODUCTS	Crude oil	Vapor Pressure by Reid method	ASTM D323
162	CHEMICAL- PETROLEUM AND PRODUCTS	Crude oil	Vapor Pressure by Reid method	IS 1448 Part 39
163	CHEMICAL- PETROLEUM AND PRODUCTS	Fuel Oil (FO)	Ash Content	ASTM D482
164	CHEMICAL- PETROLEUM AND PRODUCTS	Fuel Oil (FO)	Ash Content	IS 1448 (Part 4) Sec 1
165	CHEMICAL- PETROLEUM AND PRODUCTS	Fuel Oil (FO)	Ash Content	ISO 6245
166	CHEMICAL- PETROLEUM AND PRODUCTS	Fuel Oil (FO)	Asphaltenes	ASTM D6560
167	CHEMICAL- PETROLEUM AND PRODUCTS	Fuel Oil (FO)	Asphaltenes	IS 1448 (Part 22)
168	CHEMICAL- PETROLEUM AND PRODUCTS	Fuel Oil (FO)	Calorific value	IS 1448 (Part 7)
169	CHEMICAL- PETROLEUM AND PRODUCTS	Fuel Oil (FO)	Carbon Residue by Rams Bottom Method	ASTM D524
170	CHEMICAL- PETROLEUM AND PRODUCTS	Fuel Oil (FO)	Carbon Residue by Rams Bottom Method	IS 1448 (Part 8)

SCOPE OF ACCREDITATION

Laboratory Name : HINDUSTAN PETROLEUM CORPORATION LIMITED, VISAKH REFINERY- QUALITYCONTROL LABORATORY, MALKAPURAM, VISAKHAPATNAM, ANDHRA PRADESH, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number TC-7406 **Page No** 10 of 27

Validity 10/11/2022 to 09/11/2024 **Last Amended on** -

S.No	Discipline / Group	Materials or Products tested	Component, parameter or characteristic tested / Specific Test Performed / Tests or type of tests performed	Test Method Specification against which tests are performed and / or the techniques / equipment used
171	CHEMICAL- PETROLEUM AND PRODUCTS	Fuel Oil (FO)	Cleanliness and Compatibility by Spot Test	ASTM D4740
172	CHEMICAL- PETROLEUM AND PRODUCTS	Fuel Oil (FO)	Density by hydrometer	ASTM D1298
173	CHEMICAL- PETROLEUM AND PRODUCTS	Fuel Oil (FO)	Density by hydrometer	IS 1448 (Part 16)
174	CHEMICAL- PETROLEUM AND PRODUCTS	Fuel Oil (FO)	Estimation of Aluminum Using ICP	ASTM D5184
175	CHEMICAL- PETROLEUM AND PRODUCTS	Fuel Oil (FO)	Estimation of Aluminum Using ICP	IP 501
176	CHEMICAL- PETROLEUM AND PRODUCTS	Fuel Oil (FO)	Estimation of Calcium Using ICP	IP 501
177	CHEMICAL- PETROLEUM AND PRODUCTS	Fuel Oil (FO)	Estimation of Iron Using ICP	IP 501
178	CHEMICAL- PETROLEUM AND PRODUCTS	Fuel Oil (FO)	Estimation of Nickel Using ICP	IP 501
179	CHEMICAL- PETROLEUM AND PRODUCTS	Fuel Oil (FO)	Estimation of Phosphorus Using ICP	IP 501
180	CHEMICAL- PETROLEUM AND PRODUCTS	Fuel Oil (FO)	Estimation of Silicon Using ICP	ASTM D5184
181	CHEMICAL- PETROLEUM AND PRODUCTS	Fuel Oil (FO)	Estimation of Silicon Using ICP	IP 501
182	CHEMICAL- PETROLEUM AND PRODUCTS	Fuel Oil (FO)	Estimation of Sodium Using ICP	IP 501
183	CHEMICAL- PETROLEUM AND PRODUCTS	Fuel Oil (FO)	Estimation of Vanadium Using ICP	IP 501
184	CHEMICAL- PETROLEUM AND PRODUCTS	Fuel Oil (FO)	Estimation of Zinc Using ICP	IP 501
185	CHEMICAL- PETROLEUM AND PRODUCTS	Fuel Oil (FO)	Flash point (PMC)	ASTM D93
186	CHEMICAL- PETROLEUM AND PRODUCTS	Fuel Oil (FO)	Flash point (PMC)	IS 1448 (Part 21)
187	CHEMICAL- PETROLEUM AND PRODUCTS	Fuel Oil (FO)	Flash point (PMC)	ISO 2719
188	CHEMICAL- PETROLEUM AND PRODUCTS	Fuel Oil (FO)	Inorganic Acidity	ASTM D664
189	CHEMICAL- PETROLEUM AND PRODUCTS	Fuel Oil (FO)	Inorganic Acidity	ASTM D974

SCOPE OF ACCREDITATION

Laboratory Name : HINDUSTAN PETROLEUM CORPORATION LIMITED, VISAKH REFINERY- QUALITYCONTROL LABORATORY, MALKAPURAM, VISAKHAPATNAM, ANDHRA PRADESH, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number TC-7406 **Page No** 11 of 27

Validity 10/11/2022 to 09/11/2024 **Last Amended on** -

S.No	Discipline / Group	Materials or Products tested	Component, parameter or characteristic tested / Specific Test Performed / Tests or type of tests performed	Test Method Specification against which tests are performed and / or the techniques / equipment used
190	CHEMICAL- PETROLEUM AND PRODUCTS	Fuel Oil (FO)	Inorganic Acidity	IS 1448 (Part 2)
191	CHEMICAL- PETROLEUM AND PRODUCTS	Fuel Oil (FO)	Micro carbon residue	ASTM D4530
192	CHEMICAL- PETROLEUM AND PRODUCTS	Fuel Oil (FO)	Micro carbon residue	ISO 10370
193	CHEMICAL- PETROLEUM AND PRODUCTS	Fuel Oil (FO)	Pour Point	ASTM D97
194	CHEMICAL- PETROLEUM AND PRODUCTS	Fuel Oil (FO)	Pour Point	IS 1448 (Part 10) Sec 2
195	CHEMICAL- PETROLEUM AND PRODUCTS	Fuel Oil (FO)	Pour Point	ISO 3016
196	CHEMICAL- PETROLEUM AND PRODUCTS	Fuel Oil (FO)	Sediment by extraction	ASTM D473
197	CHEMICAL- PETROLEUM AND PRODUCTS	Fuel Oil (FO)	Sediment by extraction	IS 1448 (Part 30)
198	CHEMICAL- PETROLEUM AND PRODUCTS	Fuel Oil (FO)	Sulphur	ASTM D4294
199	CHEMICAL- PETROLEUM AND PRODUCTS	Fuel Oil (FO)	Sulphur by EDXRF	ISO 8754
200	CHEMICAL- PETROLEUM AND PRODUCTS	Fuel Oil (FO)	Viscosity Kinematic	ASTM D445
201	CHEMICAL- PETROLEUM AND PRODUCTS	Fuel Oil (FO)	Viscosity Kinematic	IS 1448 (Part 25)/Sec 1
202	CHEMICAL- PETROLEUM AND PRODUCTS	Fuel Oil (FO)	Water by Distillation	ASTM D95
203	CHEMICAL- PETROLEUM AND PRODUCTS	Fuel Oil (FO)	Water by Distillation	IS 1448 (Part 40)
204	CHEMICAL- PETROLEUM AND PRODUCTS	Heating Oil (LDO)	Acidity	ASTM D974
205	CHEMICAL- PETROLEUM AND PRODUCTS	Heating Oil (LDO)	Acidity	IS 1448 (Part 2)
206	CHEMICAL- PETROLEUM AND PRODUCTS	Heating Oil (LDO)	Ash Content	ASTM D482
207	CHEMICAL- PETROLEUM AND PRODUCTS	Heating Oil (LDO)	Ash Content	IS 1448 (Part 4) Sec 1
208	CHEMICAL- PETROLEUM AND PRODUCTS	Heating Oil (LDO)	Carbon Residue by Rams Bottom Method	ASTM D524

SCOPE OF ACCREDITATION

Laboratory Name : HINDUSTAN PETROLEUM CORPORATION LIMITED, VISAKH REFINERY- QUALITYCONTROL LABORATORY, MALKAPURAM, VISAKHAPATNAM, ANDHRA PRADESH, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number TC-7406 **Page No** 12 of 27

Validity 10/11/2022 to 09/11/2024 **Last Amended on** -

S.No	Discipline / Group	Materials or Products tested	Component, parameter or characteristic tested / Specific Test Performed / Tests or type of tests performed	Test Method Specification against which tests are performed and / or the techniques / equipment used
209	CHEMICAL- PETROLEUM AND PRODUCTS	Heating Oil (LDO)	Carbon Residue by Rams Bottom Method	IS 1448 (Part 8)
210	CHEMICAL- PETROLEUM AND PRODUCTS	Heating Oil (LDO)	Copper Corrosion	ASTM D130
211	CHEMICAL- PETROLEUM AND PRODUCTS	Heating Oil (LDO)	Copper Corrosion	IS 1448 (Part 15)
212	CHEMICAL- PETROLEUM AND PRODUCTS	Heating Oil (LDO)	Density by hydrometer	ASTM D1298
213	CHEMICAL- PETROLEUM AND PRODUCTS	Heating Oil (LDO)	Density by hydrometer	IS 1448 (Part 16)
214	CHEMICAL- PETROLEUM AND PRODUCTS	Heating Oil (LDO)	Flash point (PMC)	ASTM D93
215	CHEMICAL- PETROLEUM AND PRODUCTS	Heating Oil (LDO)	Flash point (PMC)	IS 1448 (Part 21)
216	CHEMICAL- PETROLEUM AND PRODUCTS	Heating Oil (LDO)	Pour Point	ASTM D97
217	CHEMICAL- PETROLEUM AND PRODUCTS	Heating Oil (LDO)	Pour Point	IS 1448 (Part 10) Sec 2
218	CHEMICAL- PETROLEUM AND PRODUCTS	Heating Oil (LDO)	Sediment by extraction	ASTM D473
219	CHEMICAL- PETROLEUM AND PRODUCTS	Heating Oil (LDO)	Sediment by extraction	IS 1448 (Part 30)
220	CHEMICAL- PETROLEUM AND PRODUCTS	Heating Oil (LDO)	Sulphur by EDXRF	ASTM D4294
221	CHEMICAL- PETROLEUM AND PRODUCTS	Heating Oil (LDO)	Viscosity Kinematic	ASTM D445
222	CHEMICAL- PETROLEUM AND PRODUCTS	Heating Oil (LDO)	Viscosity Kinematic	IS 1448 (Part 25)/Sec 1
223	CHEMICAL- PETROLEUM AND PRODUCTS	Heating Oil (LDO)	Water by Distillation	ASTM D95
224	CHEMICAL- PETROLEUM AND PRODUCTS	Heating Oil (LDO)	Water by Distillation	IS 1448 (Part 40)
225	CHEMICAL- PETROLEUM AND PRODUCTS	High Flash High Speed Diesel (HFHSD)	Acidity	ASTM D974
226	CHEMICAL- PETROLEUM AND PRODUCTS	High Flash High Speed Diesel (HFHSD)	Acidity	IS 1448 (Part 2)
227	CHEMICAL- PETROLEUM AND PRODUCTS	High Flash High Speed Diesel (HFHSD)	Ash Content	ASTM D482

SCOPE OF ACCREDITATION

Laboratory Name : HINDUSTAN PETROLEUM CORPORATION LIMITED, VISAKH REFINERY- QUALITYCONTROL LABORATORY, MALKAPURAM, VISAKHAPATNAM, ANDHRA PRADESH, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number TC-7406 **Page No** 13 of 27

Validity 10/11/2022 to 09/11/2024 **Last Amended on** -

S.No	Discipline / Group	Materials or Products tested	Component, parameter or characteristic tested / Specific Test Performed / Tests or type of tests performed	Test Method Specification against which tests are performed and / or the techniques / equipment used
228	CHEMICAL- PETROLEUM AND PRODUCTS	High Flash High Speed Diesel (HFHSD)	Ash Content	IS 1448 (Part 4) Sec 1
229	CHEMICAL- PETROLEUM AND PRODUCTS	High Flash High Speed Diesel (HFHSD)	Calculated Cetane Index by Four Variable Equation	ASTM D4737
230	CHEMICAL- PETROLEUM AND PRODUCTS	High Flash High Speed Diesel (HFHSD)	Calculated Cetane Index by Four Variable Equation	ISO 4264
231	CHEMICAL- PETROLEUM AND PRODUCTS	High Flash High Speed Diesel (HFHSD)	Carbon Residue by Rams Bottom Method	ASTM D524
232	CHEMICAL- PETROLEUM AND PRODUCTS	High Flash High Speed Diesel (HFHSD)	Carbon Residue by Rams Bottom Method	IS 1448 (Part 8)
233	CHEMICAL- PETROLEUM AND PRODUCTS	High Flash High Speed Diesel (HFHSD)	Cold filter Plugging point (CFPP)	ASTM D6371
234	CHEMICAL- PETROLEUM AND PRODUCTS	High Flash High Speed Diesel (HFHSD)	Cold filter Plugging point (CFPP)	IS 1448 (Part 110)
235	CHEMICAL- PETROLEUM AND PRODUCTS	High Flash High Speed Diesel (HFHSD)	Copper Corrosion	ASTM D130
236	CHEMICAL- PETROLEUM AND PRODUCTS	High Flash High Speed Diesel (HFHSD)	Copper Corrosion	IS 1448 (Part 15)
237	CHEMICAL- PETROLEUM AND PRODUCTS	High Flash High Speed Diesel (HFHSD)	Density by hydrometer	ASTM D1298
238	CHEMICAL- PETROLEUM AND PRODUCTS	High Flash High Speed Diesel (HFHSD)	Density by hydrometer	IS 1448 (Part 16)
239	CHEMICAL- PETROLEUM AND PRODUCTS	High Flash High Speed Diesel (HFHSD)	Density of Liquids by Digital Density Meter	ASTM D4052
240	CHEMICAL- PETROLEUM AND PRODUCTS	High Flash High Speed Diesel (HFHSD)	Distillation temperature Range	ISO 3405
241	CHEMICAL- PETROLEUM AND PRODUCTS	High Flash High Speed Diesel (HFHSD)	Distillation temperature Range	ASTM D 86
242	CHEMICAL- PETROLEUM AND PRODUCTS	High Flash High Speed Diesel (HFHSD)	Distillation temperature Range	IS 1448 (Part 18)
243	CHEMICAL- PETROLEUM AND PRODUCTS	High Flash High Speed Diesel (HFHSD)	Distillation volume range	ASTM D 86
244	CHEMICAL- PETROLEUM AND PRODUCTS	High Flash High Speed Diesel (HFHSD)	Distillation volume range	IS 1448 (Part 18)
245	CHEMICAL- PETROLEUM AND PRODUCTS	High Flash High Speed Diesel (HFHSD)	Distillation volume range	ISO 3405
246	CHEMICAL- PETROLEUM AND PRODUCTS	High Flash High Speed Diesel (HFHSD)	Distillation, recovered @ 350°C	ASTM D 86

SCOPE OF ACCREDITATION

Laboratory Name : HINDUSTAN PETROLEUM CORPORATION LIMITED, VISAKH REFINERY- QUALITYCONTROL LABORATORY, MALKAPURAM, VISAKHAPATNAM, ANDHRA PRADESH, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number TC-7406 **Page No** 14 of 27

Validity 10/11/2022 to 09/11/2024 **Last Amended on** -

S.No	Discipline / Group	Materials or Products tested	Component, parameter or characteristic tested / Specific Test Performed / Tests or type of tests performed	Test Method Specification against which tests are performed and / or the techniques / equipment used
247	CHEMICAL- PETROLEUM AND PRODUCTS	High Flash High Speed Diesel (HFHSD)	Distillation, recovered @ 350°C	IS 1448 (Part 18)
248	CHEMICAL- PETROLEUM AND PRODUCTS	High Flash High Speed Diesel (HFHSD)	Distillation, recovered @ 350°C	ISO 3405
249	CHEMICAL- PETROLEUM AND PRODUCTS	High Flash High Speed Diesel (HFHSD)	Distillation, recovered @ 370°C	ASTM D 86
250	CHEMICAL- PETROLEUM AND PRODUCTS	High Flash High Speed Diesel (HFHSD)	Distillation, recovered @ 370°C	IS 1448 (Part 18)
251	CHEMICAL- PETROLEUM AND PRODUCTS	High Flash High Speed Diesel (HFHSD)	Distillation, recovered @ 370°C	ISO 3405
252	CHEMICAL- PETROLEUM AND PRODUCTS	High Flash High Speed Diesel (HFHSD)	Flash point (PMC)	ASTM D93
253	CHEMICAL- PETROLEUM AND PRODUCTS	High Flash High Speed Diesel (HFHSD)	Flash point (PMC)	IS 1448 (Part 21)
254	CHEMICAL- PETROLEUM AND PRODUCTS	High Flash High Speed Diesel (HFHSD)	Lubricity by HFRR	ASTM D6079
255	CHEMICAL- PETROLEUM AND PRODUCTS	High Flash High Speed Diesel (HFHSD)	Lubricity by HFRR	ISO 12156-1
256	CHEMICAL- PETROLEUM AND PRODUCTS	High Flash High Speed Diesel (HFHSD)	Oxidation stability	ASTM D2274
257	CHEMICAL- PETROLEUM AND PRODUCTS	High Flash High Speed Diesel (HFHSD)	Oxidation stability	IS 1448 (Part 154)
258	CHEMICAL- PETROLEUM AND PRODUCTS	High Flash High Speed Diesel (HFHSD)	Pour Point	ASTM D97
259	CHEMICAL- PETROLEUM AND PRODUCTS	High Flash High Speed Diesel (HFHSD)	Pour Point	IS 1448 (Part 10) Sec 2
260	CHEMICAL- PETROLEUM AND PRODUCTS	High Flash High Speed Diesel (HFHSD)	Pour Point	ISO 3016
261	CHEMICAL- PETROLEUM AND PRODUCTS	High Flash High Speed Diesel (HFHSD)	Sulphur by EDXRF	ASTM D4294
262	CHEMICAL- PETROLEUM AND PRODUCTS	High Flash High Speed Diesel (HFHSD)	Sulphur by WDXRF	ASTM D2622
263	CHEMICAL- PETROLEUM AND PRODUCTS	High Flash High Speed Diesel (HFHSD)	Viscosity Kinematic	ASTM D445
264	CHEMICAL- PETROLEUM AND PRODUCTS	High Flash High Speed Diesel (HFHSD)	Viscosity Kinematic	IS 1448 (Part 25)/Sec 1
265	CHEMICAL- PETROLEUM AND PRODUCTS	High Flash High Speed Diesel (HFHSD)	Viscosity Kinematic	ISO 3104

SCOPE OF ACCREDITATION

Laboratory Name : HINDUSTAN PETROLEUM CORPORATION LIMITED, VISAKH REFINERY- QUALITYCONTROL LABORATORY, MALKAPURAM, VISAKHAPATNAM, ANDHRA PRADESH, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number TC-7406 **Page No** 15 of 27

Validity 10/11/2022 to 09/11/2024 **Last Amended on** -

S.No	Discipline / Group	Materials or Products tested	Component, parameter or characteristic tested / Specific Test Performed / Tests or type of tests performed	Test Method Specification against which tests are performed and / or the techniques / equipment used
266	CHEMICAL- PETROLEUM AND PRODUCTS	High Flash High Speed Diesel (HFHSD)	Water - Coulometric Karl fisher Titration	ASTM D6304 Method A
267	CHEMICAL- PETROLEUM AND PRODUCTS	High Flash High Speed Diesel (HFHSD)	Water - Coulometric Karl fisher Titration	ISO 12937
268	CHEMICAL- PETROLEUM AND PRODUCTS	Jute Batching Oil (JBO)	Color - ASTM	IS 1448 (Part 12)
269	CHEMICAL- PETROLEUM AND PRODUCTS	Jute Batching Oil (JBO)	Distillation Initial Boiling Point	ASTM D 86
270	CHEMICAL- PETROLEUM AND PRODUCTS	Jute Batching Oil (JBO)	Distillation Initial Boiling Point	IS 1448 (Part 18)
271	CHEMICAL- PETROLEUM AND PRODUCTS	Jute Batching Oil (JBO)	Distillation, recovered up to 270°C	ASTM D 86
272	CHEMICAL- PETROLEUM AND PRODUCTS	Jute Batching Oil (JBO)	Distillation, recovered up to 270°C	IS 1448 (Part 18)
273	CHEMICAL- PETROLEUM AND PRODUCTS	Jute Batching Oil (JBO)	Distillation, recovered up to 370°C	ASTM D 86
274	CHEMICAL- PETROLEUM AND PRODUCTS	Jute Batching Oil (JBO)	Distillation, recovered up to 370°C	IS 1448 (Part 18)
275	CHEMICAL- PETROLEUM AND PRODUCTS	Jute Batching Oil (JBO)	Flash point (PMC)	ASTM D93
276	CHEMICAL- PETROLEUM AND PRODUCTS	Jute Batching Oil (JBO)	Flash point (PMC)	IS 1448 (Part 21)
277	CHEMICAL- PETROLEUM AND PRODUCTS	Jute Batching Oil (JBO)	Pour Point	ASTM D97
278	CHEMICAL- PETROLEUM AND PRODUCTS	Jute Batching Oil (JBO)	Pour Point	IS 1448 (Part 10) Sec 2
279	CHEMICAL- PETROLEUM AND PRODUCTS	Jute Batching Oil (JBO)	Residue	ASTM D 86
280	CHEMICAL- PETROLEUM AND PRODUCTS	Jute Batching Oil (JBO)	Residue	IS 1448 (Part 18)
281	CHEMICAL- PETROLEUM AND PRODUCTS	Jute Batching Oil (JBO)	Viscosity Kinematic	ASTM D445
282	CHEMICAL- PETROLEUM AND PRODUCTS	Jute Batching Oil (JBO)	Viscosity Kinematic	IS 1448 (Part 25)/Sec 1
283	CHEMICAL- PETROLEUM AND PRODUCTS	Kerosene	Acidity	IS 1448 (Part 2)
284	CHEMICAL- PETROLEUM AND PRODUCTS	Kerosene	Acidity	ASTM D974

SCOPE OF ACCREDITATION

Laboratory Name : HINDUSTAN PETROLEUM CORPORATION LIMITED, VISAKH REFINERY- QUALITYCONTROL LABORATORY, MALKAPURAM, VISAKHAPATNAM, ANDHRA PRADESH, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number TC-7406 **Page No** 16 of 27

Validity 10/11/2022 to 09/11/2024 **Last Amended on** -

S.No	Discipline / Group	Materials or Products tested	Component, parameter or characteristic tested / Specific Test Performed / Tests or type of tests performed	Test Method Specification against which tests are performed and / or the techniques / equipment used
285	CHEMICAL- PETROLEUM AND PRODUCTS	Kerosene	Burning Quality	IS 1448 (Part 5)
286	CHEMICAL- PETROLEUM AND PRODUCTS	Kerosene	Color - Saybolt	ASTM D156
287	CHEMICAL- PETROLEUM AND PRODUCTS	Kerosene	Color - Saybolt	IS 1448 (Part 14)
288	CHEMICAL- PETROLEUM AND PRODUCTS	Kerosene	Colour - Automatic Tristimulus method	ASTM D6045
289	CHEMICAL- PETROLEUM AND PRODUCTS	Kerosene	Copper Corrosion	ASTM D130
290	CHEMICAL- PETROLEUM AND PRODUCTS	Kerosene	Copper Corrosion	IS 1448 (Part 15)
291	CHEMICAL- PETROLEUM AND PRODUCTS	Kerosene	Density by hydrometer	ASTM D1298
292	CHEMICAL- PETROLEUM AND PRODUCTS	Kerosene	Density by hydrometer	IS 1448 (Part 16)
293	CHEMICAL- PETROLEUM AND PRODUCTS	Kerosene	Density of Liquids by Digital Density Meter	ASTM D4052
294	CHEMICAL- PETROLEUM AND PRODUCTS	Kerosene	Distillation temperature Range	ASTM D86
295	CHEMICAL- PETROLEUM AND PRODUCTS	Kerosene	Distillation temperature Range	IS 1448 (Part 18)
296	CHEMICAL- PETROLEUM AND PRODUCTS	Kerosene	Distillation temperature Range	ISO 3405
297	CHEMICAL- PETROLEUM AND PRODUCTS	Kerosene	Distillation volume range	ASTM D86
298	CHEMICAL- PETROLEUM AND PRODUCTS	Kerosene	Distillation volume range	IS 1448 (Part 18)
299	CHEMICAL- PETROLEUM AND PRODUCTS	Kerosene	Distillation volume range	ISO 3405
300	CHEMICAL- PETROLEUM AND PRODUCTS	Kerosene	Distillation Final Boiling Point	ASTM D86
301	CHEMICAL- PETROLEUM AND PRODUCTS	Kerosene	Distillation Final Boiling Point	IS 1448 (Part 18)
302	CHEMICAL- PETROLEUM AND PRODUCTS	Kerosene	Distillation Final Boiling Point	ISO 3405
303	CHEMICAL- PETROLEUM AND PRODUCTS	Kerosene	Flash point (Abel)	IP 170

SCOPE OF ACCREDITATION

Laboratory Name : HINDUSTAN PETROLEUM CORPORATION LIMITED, VISAKH REFINERY- QUALITYCONTROL LABORATORY, MALKAPURAM, VISAKHAPATNAM, ANDHRA PRADESH, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number TC-7406 **Page No** 17 of 27

Validity 10/11/2022 to 09/11/2024 **Last Amended on** -

S.No	Discipline / Group	Materials or Products tested	Component, parameter or characteristic tested / Specific Test Performed / Tests or type of tests performed	Test Method Specification against which tests are performed and / or the techniques / equipment used
304	CHEMICAL- PETROLEUM AND PRODUCTS	Kerosene	Flash point (Abel)	IS 1448 (Part 20) Method B
305	CHEMICAL- PETROLEUM AND PRODUCTS	Kerosene	Percent recovered below 200 °C	ASTM D86
306	CHEMICAL- PETROLEUM AND PRODUCTS	Kerosene	Percent recovered below 200 °C	IS 1448 (Part 18)
307	CHEMICAL- PETROLEUM AND PRODUCTS	Kerosene	Percent recovered below 200 °C	ISO 3405
308	CHEMICAL- PETROLEUM AND PRODUCTS	Kerosene	Smoke point	ASTM D1322
309	CHEMICAL- PETROLEUM AND PRODUCTS	Kerosene	Smoke point	IS 1448 (Part 31)
310	CHEMICAL- PETROLEUM AND PRODUCTS	Kerosene	Smoke point	ISO 3014
311	CHEMICAL- PETROLEUM AND PRODUCTS	Kerosene	Sulphur by EDXRF	ASTM D4294
312	CHEMICAL- PETROLEUM AND PRODUCTS	Kerosene	Sulphur by WDXRF	ASTM D2622
313	CHEMICAL- PETROLEUM AND PRODUCTS	Kerosene	Total sulphur by UV Fluorescence	ASTM D5453
314	CHEMICAL- PETROLEUM AND PRODUCTS	Liquefied Petroleum Gas (LPG)	Calculation method for Density	IP 432
315	CHEMICAL- PETROLEUM AND PRODUCTS	Liquefied Petroleum Gas (LPG)	Calculation method for Density	ISO 8973
316	CHEMICAL- PETROLEUM AND PRODUCTS	Liquefied Petroleum Gas (LPG)	Calculation method for Vapour pressure	IP 432
317	CHEMICAL- PETROLEUM AND PRODUCTS	Liquefied Petroleum Gas (LPG)	Calculation method for Vapour pressure	ISO 8973
318	CHEMICAL- PETROLEUM AND PRODUCTS	Liquefied Petroleum Gas (LPG)	Caustic	IS 4576 Note 11
319	CHEMICAL- PETROLEUM AND PRODUCTS	Liquefied Petroleum Gas (LPG)	Composition	ASTM D2163
320	CHEMICAL- PETROLEUM AND PRODUCTS	Liquefied Petroleum Gas (LPG)	Composition	IS 1448 (Part 151)
321	CHEMICAL- PETROLEUM AND PRODUCTS	Liquefied Petroleum Gas (LPG)	Copper Corrosion	IS 1448 (Part 152)
322	CHEMICAL- PETROLEUM AND PRODUCTS	Liquefied Petroleum Gas (LPG)	Free Water	IS 4576 Note 9

SCOPE OF ACCREDITATION

Laboratory Name : HINDUSTAN PETROLEUM CORPORATION LIMITED, VISAKH REFINERY- QUALITYCONTROL LABORATORY, MALKAPURAM, VISAKHAPATNAM, ANDHRA PRADESH, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number TC-7406 **Page No** 18 of 27

Validity 10/11/2022 to 09/11/2024 **Last Amended on** -

S.No	Discipline / Group	Materials or Products tested	Component, parameter or characteristic tested / Specific Test Performed / Tests or type of tests performed	Test Method Specification against which tests are performed and / or the techniques / equipment used
323	CHEMICAL- PETROLEUM AND PRODUCTS	Liquefied Petroleum Gas (LPG)	Hydrogen Sulphide in Liquefied Petroleum (LP Gases)	ASTM D2420
324	CHEMICAL- PETROLEUM AND PRODUCTS	Liquefied Petroleum Gas (LPG)	Hydrogen Sulphide in Liquefied Petroleum (LP Gases)	IS 4576 Note 6
325	CHEMICAL- PETROLEUM AND PRODUCTS	Liquefied Petroleum Gas (LPG)	Sulphur	ASTM D3246
326	CHEMICAL- PETROLEUM AND PRODUCTS	Liquefied Petroleum Gas (LPG)	Total sulphur	ASTM D 6667
327	CHEMICAL- PETROLEUM AND PRODUCTS	Low Sulfur Heavy Stock (LSHS)	Acidity	ASTM D664
328	CHEMICAL- PETROLEUM AND PRODUCTS	Low Sulfur Heavy Stock (LSHS)	Acidity	IS 1448 (Part 2)
329	CHEMICAL- PETROLEUM AND PRODUCTS	Low Sulfur Heavy Stock (LSHS)	Ash Content	ASTM D482
330	CHEMICAL- PETROLEUM AND PRODUCTS	Low Sulfur Heavy Stock (LSHS)	Ash Content	IS 1448 (Part 4) Sec 1
331	CHEMICAL- PETROLEUM AND PRODUCTS	Low Sulfur Heavy Stock (LSHS)	Calorific value	IS 1448 (Part 7)
332	CHEMICAL- PETROLEUM AND PRODUCTS	Low Sulfur Heavy Stock (LSHS)	Carbon Residue by Rams Bottom Method	ASTM D524
333	CHEMICAL- PETROLEUM AND PRODUCTS	Low Sulfur Heavy Stock (LSHS)	Carbon Residue by Rams Bottom Method	IS 1448 (Part 8)
334	CHEMICAL- PETROLEUM AND PRODUCTS	Low Sulfur Heavy Stock (LSHS)	Density by hydrometer	ASTM D1298
335	CHEMICAL- PETROLEUM AND PRODUCTS	Low Sulfur Heavy Stock (LSHS)	Density by hydrometer	IS 1448 (Part 16)
336	CHEMICAL- PETROLEUM AND PRODUCTS	Low Sulfur Heavy Stock (LSHS)	Flash point (PMC)	ASTM D93
337	CHEMICAL- PETROLEUM AND PRODUCTS	Low Sulfur Heavy Stock (LSHS)	Flash point (PMC)	IS 1448 (Part 21)
338	CHEMICAL- PETROLEUM AND PRODUCTS	Low Sulfur Heavy Stock (LSHS)	Pour Point	ASTM D97
339	CHEMICAL- PETROLEUM AND PRODUCTS	Low Sulfur Heavy Stock (LSHS)	Pour Point	IS 1448 (Part 10) Sec 2
340	CHEMICAL- PETROLEUM AND PRODUCTS	Low Sulfur Heavy Stock (LSHS)	Sediment by extraction	IS 1448 (Part 30)
341	CHEMICAL- PETROLEUM AND PRODUCTS	Low Sulfur Heavy Stock (LSHS)	Sulphur by EDXRF	ASTM D4294

SCOPE OF ACCREDITATION

Laboratory Name : HINDUSTAN PETROLEUM CORPORATION LIMITED, VISAKH REFINERY- QUALITYCONTROL LABORATORY, MALKAPURAM, VISAKHAPATNAM, ANDHRA PRADESH, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number TC-7406 **Page No** 19 of 27

Validity 10/11/2022 to 09/11/2024 **Last Amended on** -

S.No	Discipline / Group	Materials or Products tested	Component, parameter or characteristic tested / Specific Test Performed / Tests or type of tests performed	Test Method Specification against which tests are performed and / or the techniques / equipment used
342	CHEMICAL- PETROLEUM AND PRODUCTS	Low Sulfur Heavy Stock (LSHS)	Viscosity Kinematic	ASTM D445
343	CHEMICAL- PETROLEUM AND PRODUCTS	Low Sulfur Heavy Stock (LSHS)	Viscosity Kinematic	IS 1448 (Part 25)/Sec 1
344	CHEMICAL- PETROLEUM AND PRODUCTS	Low Sulfur Heavy Stock (LSHS)	Water by Distillation	ASTM D95
345	CHEMICAL- PETROLEUM AND PRODUCTS	Low Sulfur Heavy Stock (LSHS)	Water by Distillation	IS 1448 (Part 40)
346	CHEMICAL- PETROLEUM AND PRODUCTS	Mineral Turpine Oil (MTO)	Color - Saybolt	ASTM D156
347	CHEMICAL- PETROLEUM AND PRODUCTS	Mineral Turpine Oil (MTO)	Colour - Automatic Tristimulus method	ASTM D6045
348	CHEMICAL- PETROLEUM AND PRODUCTS	Mineral Turpine Oil (MTO)	Copper Corrosion	ASTM D130
349	CHEMICAL- PETROLEUM AND PRODUCTS	Mineral Turpine Oil (MTO)	Copper Corrosion	IS 1448 (Part 15)
350	CHEMICAL- PETROLEUM AND PRODUCTS	Mineral Turpine Oil (MTO)	Density by hydrometer	ASTM D1298: 2012- RA
351	CHEMICAL- PETROLEUM AND PRODUCTS	Mineral Turpine Oil (MTO)	Density by hydrometer	IS 1448 (Part 16)
352	CHEMICAL- PETROLEUM AND PRODUCTS	Mineral Turpine Oil (MTO)	Density of Liquids by Digital Density Meter	ASTM D4052
353	CHEMICAL- PETROLEUM AND PRODUCTS	Mineral Turpine Oil (MTO)	Distillation temperature Range	ASTM D86
354	CHEMICAL- PETROLEUM AND PRODUCTS	Mineral Turpine Oil (MTO)	Distillation temperature Range	IS 1448 (Part 18)
355	CHEMICAL- PETROLEUM AND PRODUCTS	Mineral Turpine Oil (MTO)	Distillation temperature Range	ISO 3405
356	CHEMICAL- PETROLEUM AND PRODUCTS	Mineral Turpine Oil (MTO)	Distillation volume range	ASTM D86
357	CHEMICAL- PETROLEUM AND PRODUCTS	Mineral Turpine Oil (MTO)	Distillation volume range	IS 1448 (Part 18)
358	CHEMICAL- PETROLEUM AND PRODUCTS	Mineral Turpine Oil (MTO)	Distillation volume range	ISO 3405
359	CHEMICAL- PETROLEUM AND PRODUCTS	Mineral Turpine Oil (MTO)	Distillation Final Boiling Point	ASTM D86
360	CHEMICAL- PETROLEUM AND PRODUCTS	Mineral Turpine Oil (MTO)	Distillation Final Boiling Point	IS 1448 (Part 18)

SCOPE OF ACCREDITATION

Laboratory Name : HINDUSTAN PETROLEUM CORPORATION LIMITED, VISAKH REFINERY- QUALITYCONTROL LABORATORY, MALKAPURAM, VISAKHAPATNAM, ANDHRA PRADESH, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number TC-7406 **Page No** 20 of 27

Validity 10/11/2022 to 09/11/2024 **Last Amended on** -

S.No	Discipline / Group	Materials or Products tested	Component, parameter or characteristic tested / Specific Test Performed / Tests or type of tests performed	Test Method Specification against which tests are performed and / or the techniques / equipment used
361	CHEMICAL- PETROLEUM AND PRODUCTS	Mineral Turpine Oil (MTO)	Distillation Final Boiling Point	ISO 3405
362	CHEMICAL- PETROLEUM AND PRODUCTS	Mineral Turpine Oil (MTO)	Distillation Initial Boiling Point	ASTM D86
363	CHEMICAL- PETROLEUM AND PRODUCTS	Mineral Turpine Oil (MTO)	Distillation Initial Boiling Point	ISO 3405
364	CHEMICAL- PETROLEUM AND PRODUCTS	Mineral Turpine Oil (MTO)	Distillation Initial Boiling Point	IS 1448 (Part 18)
365	CHEMICAL- PETROLEUM AND PRODUCTS	Mineral Turpine Oil (MTO)	Flash point (Abel)	IP 170
366	CHEMICAL- PETROLEUM AND PRODUCTS	Mineral Turpine Oil (MTO)	Flash point (Abel)	IS 1448 (Part 20)
367	CHEMICAL- PETROLEUM AND PRODUCTS	Mineral Turpine Oil (MTO)	Hydrocarbon types by FIA-Aromatics	ASTM D1319
368	CHEMICAL- PETROLEUM AND PRODUCTS	Mineral Turpine Oil (MTO)	Hydrocarbon types by FIA-Aromatics	IS 1448 (Part 23)
369	CHEMICAL- PETROLEUM AND PRODUCTS	Mineral Turpine Oil (MTO)	Mercaptan Sulphur	ASTM D3227
370	CHEMICAL- PETROLEUM AND PRODUCTS	Mineral Turpine Oil (MTO)	Mercaptan Sulphur	IS 1448 (Part 109)
371	CHEMICAL- PETROLEUM AND PRODUCTS	Mineral Turpine Oil (MTO)	Residue on Evaporation (ROE)	ASTM D381
372	CHEMICAL- PETROLEUM AND PRODUCTS	Mineral Turpine Oil (MTO)	Residue on Evaporation (ROE)	IS 1448 (Part 29)
373	CHEMICAL- PETROLEUM AND PRODUCTS	Mineral Turpine Oil (MTO)	Sulphur by EDXRF	ASTM D4294
374	CHEMICAL- PETROLEUM AND PRODUCTS	Motor Gasoline	Benzene, by Gas Chromatography	ASTM D5580
375	CHEMICAL- PETROLEUM AND PRODUCTS	Motor Gasoline	Benzene, by Gas Chromatography	ASTM D6730
376	CHEMICAL- PETROLEUM AND PRODUCTS	Motor Gasoline	Color	HPC/VRQC/Test method/2
377	CHEMICAL- PETROLEUM AND PRODUCTS	Motor Gasoline	Copper Corrosion	ASTM D130
378	CHEMICAL- PETROLEUM AND PRODUCTS	Motor Gasoline	Copper Corrosion	IS 1448 (Part 15)
379	CHEMICAL- PETROLEUM AND PRODUCTS	Motor Gasoline	Density by hydrometer	ASTM D1298

SCOPE OF ACCREDITATION

Laboratory Name : HINDUSTAN PETROLEUM CORPORATION LIMITED, VISAKH REFINERY- QUALITYCONTROL LABORATORY, MALKAPURAM, VISAKHAPATNAM, ANDHRA PRADESH, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number TC-7406 **Page No** 21 of 27

Validity 10/11/2022 to 09/11/2024 **Last Amended on** -

S.No	Discipline / Group	Materials or Products tested	Component, parameter or characteristic tested / Specific Test Performed / Tests or type of tests performed	Test Method Specification against which tests are performed and / or the techniques / equipment used
380	CHEMICAL- PETROLEUM AND PRODUCTS	Motor Gasoline	Density by hydrometer	IS 1448 (Part 16)
381	CHEMICAL- PETROLEUM AND PRODUCTS	Motor Gasoline	Density of Liquids by Digital Density Meter	ASTM D4052
382	CHEMICAL- PETROLEUM AND PRODUCTS	Motor Gasoline	Distillation Final Boiling Point	ASTM D86
383	CHEMICAL- PETROLEUM AND PRODUCTS	Motor Gasoline	Distillation Final Boiling Point	IS 1448 (Part 18)
384	CHEMICAL- PETROLEUM AND PRODUCTS	Motor Gasoline	Distillation Final Boiling Point	ISO 3405
385	CHEMICAL- PETROLEUM AND PRODUCTS	Motor Gasoline	Distillation temperature Range	ASTM D86
386	CHEMICAL- PETROLEUM AND PRODUCTS	Motor Gasoline	Distillation temperature Range	IS 1448 (Part 18)
387	CHEMICAL- PETROLEUM AND PRODUCTS	Motor Gasoline	Distillation temperature Range	ISO 3405
388	CHEMICAL- PETROLEUM AND PRODUCTS	Motor Gasoline	Distillation volume range	ASTM D86
389	CHEMICAL- PETROLEUM AND PRODUCTS	Motor Gasoline	Distillation volume range	IS 1448 (Part 18)
390	CHEMICAL- PETROLEUM AND PRODUCTS	Motor Gasoline	Distillation volume range	ISO 3405
391	CHEMICAL- PETROLEUM AND PRODUCTS	Motor Gasoline	Ethanol content	Annex-C of IS 2796
392	CHEMICAL- PETROLEUM AND PRODUCTS	Motor Gasoline	Ethanol content	ASTM D4815
393	CHEMICAL- PETROLEUM AND PRODUCTS	Motor Gasoline	Existent Gum	ASTM D381
394	CHEMICAL- PETROLEUM AND PRODUCTS	Motor Gasoline	Existent Gum	IS 1448 (Part 29)
395	CHEMICAL- PETROLEUM AND PRODUCTS	Motor Gasoline	Hydrocarbon types by FIA-Aromatics	ASTM D1319
396	CHEMICAL- PETROLEUM AND PRODUCTS	Motor Gasoline	Hydrocarbon types by FIA-Aromatics	IS 1448 (Part 23)
397	CHEMICAL- PETROLEUM AND PRODUCTS	Motor Gasoline	Hydrocarbon types by FIA-Olefins	ASTM D1319
398	CHEMICAL- PETROLEUM AND PRODUCTS	Motor Gasoline	Hydrocarbon types by FIA-Olefins	IS 1448 (Part 23)

SCOPE OF ACCREDITATION

Laboratory Name : HINDUSTAN PETROLEUM CORPORATION LIMITED, VISAKH REFINERY- QUALITYCONTROL LABORATORY, MALKAPURAM, VISAKHAPATNAM, ANDHRA PRADESH, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number TC-7406 **Page No** 22 of 27

Validity 10/11/2022 to 09/11/2024 **Last Amended on** -

S.No	Discipline / Group	Materials or Products tested	Component, parameter or characteristic tested / Specific Test Performed / Tests or type of tests performed	Test Method Specification against which tests are performed and / or the techniques / equipment used
399	CHEMICAL- PETROLEUM AND PRODUCTS	Motor Gasoline	Lead Content	ASTM D5059
400	CHEMICAL- PETROLEUM AND PRODUCTS	Motor Gasoline	Manual Distillation volume range	IS 1448 (Part 18)
401	CHEMICAL- PETROLEUM AND PRODUCTS	Motor Gasoline	Manual Distillation temperature Range	IS 1448 (Part 18)
402	CHEMICAL- PETROLEUM AND PRODUCTS	Motor Gasoline	MON (Motor Octane Number)	ASTM D2700
403	CHEMICAL- PETROLEUM AND PRODUCTS	Motor Gasoline	MON (Motor Octane Number)	IS 1448 (Part 26)
404	CHEMICAL- PETROLEUM AND PRODUCTS	Motor Gasoline	Oxidation stability - Induction Period	ASTM D525
405	CHEMICAL- PETROLEUM AND PRODUCTS	Motor Gasoline	Oxidation stability - Induction Period	IS 1448 (Part 28)
406	CHEMICAL- PETROLEUM AND PRODUCTS	Motor Gasoline	Oxygen content	ASTM D4815
407	CHEMICAL- PETROLEUM AND PRODUCTS	Motor Gasoline	Oxygenates	ASTM D4815
408	CHEMICAL- PETROLEUM AND PRODUCTS	Motor Gasoline	Percent evaporated at 100°C (E 100°C), % v/v	ASTM D86
409	CHEMICAL- PETROLEUM AND PRODUCTS	Motor Gasoline	Percent evaporated at 100°C (E 100°C), % v/v	IS 1448 (Part 18)
410	CHEMICAL- PETROLEUM AND PRODUCTS	Motor Gasoline	Percent evaporated at 100°C (E 100°C), % v/v	ISO 3405
411	CHEMICAL- PETROLEUM AND PRODUCTS	Motor Gasoline	Percent evaporated at 150°C (E 150°C), % v/v	ASTM D86
412	CHEMICAL- PETROLEUM AND PRODUCTS	Motor Gasoline	Percent evaporated at 150°C (E 150°C), % v/v	IS 1448 (Part 18)
413	CHEMICAL- PETROLEUM AND PRODUCTS	Motor Gasoline	Percent evaporated at 150°C (E 150°C), % v/v	ISO 3405
414	CHEMICAL- PETROLEUM AND PRODUCTS	Motor Gasoline	Percent evaporated at 70°C (E 70°C), % v/v	ASTM D86
415	CHEMICAL- PETROLEUM AND PRODUCTS	Motor Gasoline	Percent evaporated at 70°C (E 70°C), % v/v	IS 1448 (Part 18)
416	CHEMICAL- PETROLEUM AND PRODUCTS	Motor Gasoline	Percent evaporated at 70°C (E 70°C), % v/v	ISO 3405
417	CHEMICAL- PETROLEUM AND PRODUCTS	Motor Gasoline	Residue	ASTM D86

SCOPE OF ACCREDITATION

Laboratory Name : HINDUSTAN PETROLEUM CORPORATION LIMITED, VISAKH REFINERY- QUALITYCONTROL LABORATORY, MALKAPURAM, VISAKHAPATNAM, ANDHRA PRADESH, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number TC-7406 **Page No** 23 of 27

Validity 10/11/2022 to 09/11/2024 **Last Amended on** -

S.No	Discipline / Group	Materials or Products tested	Component, parameter or characteristic tested / Specific Test Performed / Tests or type of tests performed	Test Method Specification against which tests are performed and / or the techniques / equipment used
418	CHEMICAL- PETROLEUM AND PRODUCTS	Motor Gasoline	Residue	IS 1448 (Part 18)
419	CHEMICAL- PETROLEUM AND PRODUCTS	Motor Gasoline	Residue	ISO 3405
420	CHEMICAL- PETROLEUM AND PRODUCTS	Motor Gasoline	RON (Research Octane number)	ASTM D2699
421	CHEMICAL- PETROLEUM AND PRODUCTS	Motor Gasoline	RON (Research Octane number)	IS 1448 (Part 27)
422	CHEMICAL- PETROLEUM AND PRODUCTS	Motor Gasoline	Sulphur	ASTM D3120
423	CHEMICAL- PETROLEUM AND PRODUCTS	Motor Gasoline	Total sulphur	ASTM D5453
424	CHEMICAL- PETROLEUM AND PRODUCTS	Motor Gasoline	Vapour pressure by Mini method	ASTM D5191
425	CHEMICAL- PETROLEUM AND PRODUCTS	Motor Gasoline	Vapour Pressure by Reid method	ASTM D323
426	CHEMICAL- PETROLEUM AND PRODUCTS	Motor Gasoline	Vapour Pressure by Reid method	IS 1448 (Part 39)
427	CHEMICAL- PETROLEUM AND PRODUCTS	Motor Gasoline	VLI (Vapor Lock Index)	VLI= 10 *RVP+7 *E70 (IS 2796)
428	CHEMICAL- PETROLEUM AND PRODUCTS	Motor Gasoline	Water tolerance of motor gasoline-alcohol blends, temperature for phase separation	Annex-B of IS 2796
429	CHEMICAL- PETROLEUM AND PRODUCTS	Naphtha	Calorific value	IS 1448 (Part 7)
430	CHEMICAL- PETROLEUM AND PRODUCTS	Naphtha	Carbon Residue by Rams Bottom Method	ASTM D524
431	CHEMICAL- PETROLEUM AND PRODUCTS	Naphtha	Carbon Residue by Rams Bottom Method	IS 1448 (Part 8)
432	CHEMICAL- PETROLEUM AND PRODUCTS	Naphtha	Color - Saybolt	ASTM D 156
433	CHEMICAL- PETROLEUM AND PRODUCTS	Naphtha	Color - Saybolt	IS 1448 (Part 14)
434	CHEMICAL- PETROLEUM AND PRODUCTS	Naphtha	Colour - Automatic Tristimulus method	ASTM D6045
435	CHEMICAL- PETROLEUM AND PRODUCTS	Naphtha	Density by hydrometer	ASTM D1298

SCOPE OF ACCREDITATION

Laboratory Name : HINDUSTAN PETROLEUM CORPORATION LIMITED, VISAKH REFINERY- QUALITYCONTROL LABORATORY, MALKAPURAM, VISAKHAPATNAM, ANDHRA PRADESH, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number TC-7406 **Page No** 24 of 27

Validity 10/11/2022 to 09/11/2024 **Last Amended on** -

S.No	Discipline / Group	Materials or Products tested	Component, parameter or characteristic tested / Specific Test Performed / Tests or type of tests performed	Test Method Specification against which tests are performed and / or the techniques / equipment used
436	CHEMICAL- PETROLEUM AND PRODUCTS	Naphtha	Density by hydrometer	IS 1448 (Part 16)
437	CHEMICAL- PETROLEUM AND PRODUCTS	Naphtha	Density of Liquids by Digital Density Meter	ASTM D4052
438	CHEMICAL- PETROLEUM AND PRODUCTS	Naphtha	Distillation Final Boiling Point (FBP)	IS 1448 (Part 18)
439	CHEMICAL- PETROLEUM AND PRODUCTS	Naphtha	Distillation Final Boiling Point	ASTM D86
440	CHEMICAL- PETROLEUM AND PRODUCTS	Naphtha	Distillation Final Boiling Point	IP 123
441	CHEMICAL- PETROLEUM AND PRODUCTS	Naphtha	Distillation Final Boiling Point	ISO 3405
442	CHEMICAL- PETROLEUM AND PRODUCTS	Naphtha	Distillation Initial Boiling Point	ASTM D86
443	CHEMICAL- PETROLEUM AND PRODUCTS	Naphtha	Distillation Initial Boiling Point	ISO 3405
444	CHEMICAL- PETROLEUM AND PRODUCTS	Naphtha	Distillation Initial Boiling Point (IBP)	IS 1448 (Part 18):
445	CHEMICAL- PETROLEUM AND PRODUCTS	Naphtha	Distillation Initial Boiling Point	IP 123
446	CHEMICAL- PETROLEUM AND PRODUCTS	Naphtha	Distillation Range	IP 123
447	CHEMICAL- PETROLEUM AND PRODUCTS	Naphtha	Distillation Range	IS 1448 (Part 18):
448	CHEMICAL- PETROLEUM AND PRODUCTS	Naphtha	Distillation Temperature Range	ASTM D86
449	CHEMICAL- PETROLEUM AND PRODUCTS	Naphtha	Distillation temperature Range	ISO 3405
450	CHEMICAL- PETROLEUM AND PRODUCTS	Naphtha	Distillation volume range	IS 1448 (Part 18)
451	CHEMICAL- PETROLEUM AND PRODUCTS	Naphtha	Distillation volume range	ASTM D86
452	CHEMICAL- PETROLEUM AND PRODUCTS	Naphtha	Distillation volume range	IP 123
453	CHEMICAL- PETROLEUM AND PRODUCTS	Naphtha	Distillation volume range	ISO 3405
454	CHEMICAL- PETROLEUM AND PRODUCTS	Naphtha	Hydrocarbon type by Gas Chromatography (Aromatics)	ASTM D5443

SCOPE OF ACCREDITATION

Laboratory Name : HINDUSTAN PETROLEUM CORPORATION LIMITED, VISAKH REFINERY- QUALITYCONTROL LABORATORY, MALKAPURAM, VISAKHAPATNAM, ANDHRA PRADESH, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number TC-7406 **Page No** 25 of 27

Validity 10/11/2022 to 09/11/2024 **Last Amended on** -

S.No	Discipline / Group	Materials or Products tested	Component, parameter or characteristic tested / Specific Test Performed / Tests or type of tests performed	Test Method Specification against which tests are performed and / or the techniques / equipment used
455	CHEMICAL- PETROLEUM AND PRODUCTS	Naphtha	Hydrocarbon type by Gas Chromatography (Naphthenes)	ASTM D5443
456	CHEMICAL- PETROLEUM AND PRODUCTS	Naphtha	Hydrocarbon type by Gas Chromatography (Olefins)	ASTM D5443
457	CHEMICAL- PETROLEUM AND PRODUCTS	Naphtha	Hydrocarbon type by Gas Chromatography (Paraffins)	ASTM D5443
458	CHEMICAL- PETROLEUM AND PRODUCTS	Naphtha	Non Volatile matter	IS 1448 (Part 64)
459	CHEMICAL- PETROLEUM AND PRODUCTS	Naphtha	Olefins	ASTM D6839
460	CHEMICAL- PETROLEUM AND PRODUCTS	Naphtha	Organic Chloride	ASTM D4929 Method B
461	CHEMICAL- PETROLEUM AND PRODUCTS	Naphtha	Relative Density of Liquids by Digital Density meter.	ASTM D4052
462	CHEMICAL- PETROLEUM AND PRODUCTS	Naphtha	Residue On Evaporation	ASTM D381
463	CHEMICAL- PETROLEUM AND PRODUCTS	Naphtha	Residue On Evaporation	IS 1448 (Part 29)
464	CHEMICAL- PETROLEUM AND PRODUCTS	Naphtha	Specific Gravity 60/60 °F	ASTM D4052
465	CHEMICAL- PETROLEUM AND PRODUCTS	Naphtha	Sulphur	ASTM D4294
466	CHEMICAL- PETROLEUM AND PRODUCTS	Naphtha	Vapour pressure by Mini method	ASTM D5191
467	CHEMICAL- PETROLEUM AND PRODUCTS	Naphtha	Vapour Pressure by Reid method	ASTM D323
468	CHEMICAL- PETROLEUM AND PRODUCTS	Naphtha	Vapour Pressure by Reid method	IS 1448 (Part 39)
469	CHEMICAL- PETROLEUM AND PRODUCTS	Propylene	Analysis of Propylene concentration by GC	ASTM D2163
470	CHEMICAL- PETROLEUM AND PRODUCTS	Propylene	Calculation method for Density	IP 432
471	CHEMICAL- PETROLEUM AND PRODUCTS	Propylene	Sulphur	ASTM D3246
472	CHEMICAL- PETROLEUM AND PRODUCTS	Vacuum Gas Oil (VGO)	Carbon Residue by Rams Bottom Method	ASTM D524
473	CHEMICAL- PETROLEUM AND PRODUCTS	Vacuum Gas Oil (VGO)	Carbon Residue by Rams Bottom Method	IS 1448 (Part 8)

SCOPE OF ACCREDITATION

Laboratory Name : HINDUSTAN PETROLEUM CORPORATION LIMITED, VISAKH REFINERY- QUALITYCONTROL LABORATORY, MALKAPURAM, VISAKHAPATNAM, ANDHRA PRADESH, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number TC-7406 **Page No** 26 of 27

Validity 10/11/2022 to 09/11/2024 **Last Amended on** -

S.No	Discipline / Group	Materials or Products tested	Component, parameter or characteristic tested / Specific Test Performed / Tests or type of tests performed	Test Method Specification against which tests are performed and / or the techniques / equipment used
474	CHEMICAL- PETROLEUM AND PRODUCTS	Vacuum Gas Oil (VGO)	Density by hydrometer	ASTM D1298
475	CHEMICAL- PETROLEUM AND PRODUCTS	Vacuum Gas Oil (VGO)	Density by hydrometer	IS 1448 (Part 16)
476	CHEMICAL- PETROLEUM AND PRODUCTS	Vacuum Gas Oil (VGO)	Flash point (PMC)	ASTM D93
477	CHEMICAL- PETROLEUM AND PRODUCTS	Vacuum Gas Oil (VGO)	Flash point (PMC)	IS 1448 (Part 21)
478	CHEMICAL- PETROLEUM AND PRODUCTS	Vacuum Gas Oil (VGO)	Pour Point	ASTM D97
479	CHEMICAL- PETROLEUM AND PRODUCTS	Vacuum Gas Oil (VGO)	Pour Point	IS 1448 (Part 10) Sec 2
480	CHEMICAL- PETROLEUM AND PRODUCTS	Vacuum Gas Oil (VGO)	Sulphur by EDXRF	ASTM D4294
481	CHEMICAL- PETROLEUM AND PRODUCTS	Vacuum Gas Oil (VGO)	Viscosity Kinematic	ASTM D445
482	CHEMICAL- PETROLEUM AND PRODUCTS	Vacuum Gas Oil (VGO)	Viscosity Kinematic	IS 1448 (Part 25)/Sec 1
483	CHEMICAL- PETROLEUM AND PRODUCTS	Vacuum Gas Oil (VGO)	Water by Distillation	ASTM D95
484	CHEMICAL- PETROLEUM AND PRODUCTS	Vacuum Gas Oil (VGO)	Water by Distillation	IS 1448 (Part 40)
485	CHEMICAL- PETROLEUM AND PRODUCTS	Very Low Sulfur Fuel Oil (VLSFO) Marine Fuel	Sulphur by EDXRF	ASTM D4294
486	CHEMICAL- PETROLEUM AND PRODUCTS	Very Low Sulfur Fuel Oil (VLSFO) Marine Fuel	Acidity	ASTM D664
487	CHEMICAL- PETROLEUM AND PRODUCTS	Very Low Sulfur Fuel Oil (VLSFO) Marine Fuel	Ash Content	ASTM D482
488	CHEMICAL- PETROLEUM AND PRODUCTS	Very Low Sulfur Fuel Oil (VLSFO) Marine Fuel	Ash Content	ISO 6245
489	CHEMICAL- PETROLEUM AND PRODUCTS	Very Low Sulfur Fuel Oil (VLSFO) Marine Fuel	CCAI	Sec 6.2 ISO 8217
490	CHEMICAL- PETROLEUM AND PRODUCTS	Very Low Sulfur Fuel Oil (VLSFO) Marine Fuel	Density by hydrometer	ASTM D1298
491	CHEMICAL- PETROLEUM AND PRODUCTS	Very Low Sulfur Fuel Oil (VLSFO) Marine Fuel	Density of Liquids by Digital Density Meter	ASTM D4052
492	CHEMICAL- PETROLEUM AND PRODUCTS	Very Low Sulfur Fuel Oil (VLSFO) Marine Fuel	Density of Liquids by Digital Density Meter	ISO 12185

SCOPE OF ACCREDITATION

Laboratory Name : HINDUSTAN PETROLEUM CORPORATION LIMITED, VISAKH REFINERY- QUALITYCONTROL LABORATORY, MALKAPURAM, VISAKHAPATNAM, ANDHRA PRADESH, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number TC-7406 **Page No** 27 of 27

Validity 10/11/2022 to 09/11/2024 **Last Amended on** -

S.No	Discipline / Group	Materials or Products tested	Component, parameter or characteristic tested / Specific Test Performed / Tests or type of tests performed	Test Method Specification against which tests are performed and / or the techniques / equipment used
493	CHEMICAL- PETROLEUM AND PRODUCTS	Very Low Sulfur Fuel Oil (VLSFO) Marine Fuel	Flash point (PMC)	ISO 2719: Proc B
494	CHEMICAL- PETROLEUM AND PRODUCTS	Very Low Sulfur Fuel Oil (VLSFO) Marine Fuel	Hydrogen Sulphide in Fuel oils	IP 570
495	CHEMICAL- PETROLEUM AND PRODUCTS	Very Low Sulfur Fuel Oil (VLSFO) Marine Fuel	Potential Total Sediments	ASTM D4870
496	CHEMICAL- PETROLEUM AND PRODUCTS	Very Low Sulfur Fuel Oil (VLSFO) Marine Fuel	Potential Total Sediments after Aging.	ISO 10307-2
497	CHEMICAL- PETROLEUM AND PRODUCTS	Very Low Sulfur Fuel Oil (VLSFO) Marine Fuel	Pour Point	ISO 3016
498	CHEMICAL- PETROLEUM AND PRODUCTS	Very Low Sulfur Fuel Oil (VLSFO) Marine Fuel	Total sediment in residual fuel oils- by hot filtration	ISO 10307-1
499	CHEMICAL- PETROLEUM AND PRODUCTS	Very Low Sulfur Fuel Oil (VLSFO) Marine Fuel	Viscosity Kinematic	ASTM D445
500	CHEMICAL- PETROLEUM AND PRODUCTS	Very Low Sulfur Fuel Oil (VLSFO) Marine Fuel	Viscosity Kinematic	IS 1448 (Part 25)/Sec 1
501	CHEMICAL- PETROLEUM AND PRODUCTS	Very Low Sulfur Fuel Oil (VLSFO) Marine Fuel	Viscosity Kinematic	ISO 3104
502	CHEMICAL- PETROLEUM AND PRODUCTS	Very Low Sulfur Fuel Oil (VLSFO) Marine Fuel	Water by Distillation	ASTM D95
503	CHEMICAL- PETROLEUM AND PRODUCTS	Very Low Sulfur Fuel Oil (VLSFO) Marine Fuel	Water by Distillation	ISO 3733
504	CHEMICAL- POLLUTION & ENVIRONMENT	Effluent	BOD 3 Days 27 Deg C	IS 3025 P 44 (RA 2019)
505	CHEMICAL- POLLUTION & ENVIRONMENT	Effluent	Chemical Oxygen Demand	APHA 23rd Edition 5220 B
506	CHEMICAL- POLLUTION & ENVIRONMENT	Effluent	Chemical Oxygen Demand	APHA 23rd Edition 5220 D
507	CHEMICAL- POLLUTION & ENVIRONMENT	Effluent	Oil & Grease	APHA 23rd Ed 5520 B
508	CHEMICAL- POLLUTION & ENVIRONMENT	Effluent	pH	APHA 23rd Ed 4500-H+B
509	CHEMICAL- POLLUTION & ENVIRONMENT	Effluent	Phenol	APHA 23rd Ed 5530 D
510	CHEMICAL- POLLUTION & ENVIRONMENT	Effluent	Sulphides by Iodometric	APHA 23rd Ed 4500 S2- F
511	CHEMICAL- POLLUTION & ENVIRONMENT	Effluent	Total suspended solids	APHA 23rd Ed 2540 D